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ACC.13
62nd Annual Scientific Session & Expo
TCT@ACC-i2

E1889
JACC March 12, 2013
Volume 61, Issue 10

IMPACT OF PREOPERATIVE MODERATE/SEVERE TRICUSPID REGURGITATION ON PATIENTS UNDERGOING TRANSCATHETER AORTIC VALVE REPLACEMENT

Poster Contributions
Poster Sessions, Expo North
Monday, March 11, 2013, 9:45 a.m.-10:30 a.m.

Session Title: Structural Heart Disease Intervention
Abstract Category: 49. TCT@ACC-i2: Aortic Valve Disease
Presentation Number: 2114-229

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Background: Significant tricuspid regurgitation (TR) is a marker for late-stage myocardial and valvular heart disease. Whether preoperative TR affects clinical outcomes of patients undergoing transcatheter aortic valve replacement (TAVR) has never been investigated. This study sought to identify the impact of moderate and severe TR on outcomes after TAVR.

Methods: All patients undergoing TAVR from January 2007 to August 2012 at St. Paul's Hospital, Vancouver, Canada, (n=518) were dichotomized according to the severity of preoperative TR (moderate/severe vs. none/mild). All clinical outcomes were defined according to the VARC definitions.

Results: At baseline, moderate or severe TR was reported in 79 patients (15.2%). Patients with TR moderate/severe were older (83.5±5.9 vs 81.1±8.6 years, p=0.023), were more likely to have porcelain aorta (24.7% vs 13.7%, p=0.016), chronic renal failure (53.2% vs 35.3, p<0.001), lower left ventricular ejection fraction (49.1±14.7 vs 54.8±13.5%, p<0.001) and higher systolic pulmonary pressure (55.6±15.9 vs 41.2±18.5, p<0.001). At 30 days, moderate TR had improved in 5 patients (13.5%), was unchanged in 17 patients (45.9%), and worsened in 7 patients (18.9%). Severe TR improved in 7 patients (16.7%), and remained severe in 29 (57.1%). Of those with TR at baseline, 35 (7.9%) patients had moderate TR at 30-day follow-up. At a mean follow-up of 589±521 days, moderate or severe TR was found to be an independent predictor of all-cause mortality (36.7% vs 21.2%; adjusted hazard ratio: 2.21; 95% confidence interval [1.40-3.49], p=0.001).

Conclusions: Moderate or severe preoperative TR is associated with higher mid-term mortality after TAVR. The response of tricuspid regurgitation to TAVR is extremely variable.